PLANNING AHEAD

Notes for the Planning Community

Volume 2, Issue 7 August 1999

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Notes From Jim Johnson

Senior Leaders Conference. I have just returned from the Senior Leaders Conference, held in San Francisco, August 16-20. That conference also was interwoven with portions of the Emerging Leaders Conference held at the same location, but beginning a few days earlier. I'm not going to attempt to summarize the Conference. Instead, I recommend you access the Corps of Engineers website: www.usace.army.mil/essc/slc/slc99.htm where you can view PowerPoint presentations from the conference.

The conference was excellent. There was a lot of positive energy, from emerging and senior leaders. I am especially pleased that planning initiatives and USACE initiatives are fully aligned, and that the Corps of Engineers' future missions and programs are viewed as relying heavily on its planning capability. Planners should expect to be broadly and fully engaged in Corps of Engineers military and support for other missions as well as civil works into the future.

Command Strategic Initiatives. Over the past year, Headquarters has been fully engaged in a number of strategic initiatives. You are undoubtedly familiar with the USACE Vision and Corps Plus goals as captured in the red and white Strategic Vision pamphlet.

So, how do these concepts relate to what you do? Within the context of these goals and sub-strategies, divisions and districts have prepared campaign and operational plans respectively. How do we integrate these strategic initiatives throughout our organization? Well, we've been asking that same question at Headquarters. One of the major results has been to re-focus the Chief of Engineers' Command Management Review (CMR) to give our agency a more strategic focus. This process, which has a working title of CMR+, is intended to guide the agency into the future.

We used a "balanced scorecard" approach to reflect different four different types (or quadrants) of information that we would need to chart our course. Subsequently, we developed nine specific performance goals and measures to chart our progress into the future. The first CMR+ was held following the 3rd Quarter CMR at the Senior Leaders Conference. For the first time, USACE aligned its focus on our future mission, satisfying client and customer needs, building and maintaining our capability, and improving our business efficiency.

Strengthening Civil Works Mission. Several aspects of the conference are important to planners. First, LTG Ballard underscored the importance of strengthening our civil, military and support for others missions. Planning programs will be an important part of each of these. Throughout the Corps, there is a growing recognition that planning success and planning capability are key to future civil works program growth. And increasingly there is a recognition that planning capability also can enhance our support to military programs and to support for others. In that regard, one of the current initiatives presented at the conference under "Livable Communities" described how we are successfully addressing broader military and support for others - type problems through our civil works planning authorities.

Finally, the Assistant Secretary of Army (Civil Works) Dr. Joseph Westphal presented strong support for the civil works program, and identified several specific areas in which he thought the Corps should be involved. He described his interest in working with our leadership to develop strategies and secure a better path for future growth and opportunity for the Corps of Engineers. He also expressed interest in improving the policies that affect our water resources planning, including cost-sharing and the Principles and Guidelines.

In all, it was an excellent week. Check out the website. Hopefully, you also will sense that positive energy! 🕮

A Word from the Editor

Harry Kitch – CECW-PD

We are pleased to include our first contributor to *Planning Ahead* from outside the Corps – Ms. Cheree Peterson of the National Fish and Wildlife Foundation. We hope to feature others from the water resources community from time to time. We are also continuing our policy of including some provocative articles in the hope of generating some dialogue in the planning community. We would urge you to take a few minutes and ponder some of these articles and give us your thoughts. 🕮

Another Way To Grow

Bob Daniel – CECW-PF

The Flood Plain Management Services/Planning Assistance to States Technology Transfer Conference was held in Boston, Massachusetts, 9-11 August 1999. The general theme of the conference was "New Directions/Expanding Horizons." There were numerous presentations, some provocative, all informative, related to the theme, from Headquarters, the MSCs, and the Districts. An after-action report is being prepared for upward reporting on the conference activities, and will be placed on the Planning Division homepage in the near future, as will all available PowerPoint slide presentations. The following is excerpted from Bill Hubbard's (NAE) presentation on partnering. 🕮

Partnerships That Work

William A. Hubbard - CENAE

Whether you sell insurance or fly model planes, you usually can benefit from finding the right network of people that share similar interests. The next step in participating in any network is collaboration with one or more members of the network to achieve similar goals. If you sell insurance, you may use your network, say a Rotary Club's weekly chicken dinner, to build trust that allows word of mouth to sell your product for you. This is the model that project planners need to follow to "sell" Corps civil works programs. We need to listen to the needs of communities for sustainable growth and understand the role of the other federal agencies in successful sustainable development, especially in urban regions.

In the recent years the use of the Coastal America network has been successful in many Districts, especially the districts that are on the coast! In New England the partnership among the federal and state agencies that meet as the regional implementation team of Coastal America have been a good network for finding important aquatic ecological restoration projects.

Early in the formulation of the Coastal America partnership, it was recognized that the Corps then *new* aquatic restoration authorities could make a significant improvement in the ecology of the Northeast. The challenge was that the resource agencies could identify ecological problems, but needed the interdisciplinary expertise of the Corps to formulate solutions and evaluate their feasibility. In several instances, the flexibility of the Planning Assistance to States (Section 22) program or Flood Plain Management Services came to the rescue. Those programs allowed a rapid response to the problem and then led to solution implementation. Some solutions ere implementable by the Corps GI/CAP programs. Many of the solutions were implementable by local communities or our partners (e.g. USFWS, NRCS, NMFS, and EPA) programs. The point is that the water resource problem got fixed.

The Blackstone River General Investigation in RI, for example, had this type of origin. The cost shared Section 22 study showed the commitment of the locals, organized under the leadership of the National Park Service, to get a watershed solution that provided interstate ecological benefits. The expertise of the Corps team in formulating alternative solutions and the analyses needed to implement them allowed trust to be built among the collaborative team. That directly led to a bi-state request for a GI Reconnaissance that now is in a cost-shared Feasibility Phase.

Numerous salt marshes have been examined in New England by the biologists and hydrologists of the District using the Section 22 program. This allows alternative solutions to be analyzed and the various federal

partners can identify the best federal program available to the locals for each specific site. One marsh in New Hampshire has been analyzed by a collaborative Corps/NRCS effort using Section 22. The solution currently is being considered as fitting our Section 206 program (35% local cost) and the NRCS Wildlife Habitat Incentive Program (25% local cost share). Ultimately, we are giving the community the full plate of federal services to chose from.

In the future, the Coastal America team in the Northeast is relying on the Corps GI and Section 1135/206 authorities to be a partner in the development of alternatives and solutions as well as to build the more difficult ecological restorations. Especially important is to have the Corps examine those large degraded salt marshes that need the reintroduction of saline tidal waters to restore marsh productivity. This usually requires an in-depth analysis of the entire flood plain and meticulous sizing of the connection of the tidal exchange to the ocean. Numerous dam removals, contaminated sediment management and riverine wetlands investigations are underway in this collaborative mode. The networking and trust that these types of collaborative efforts build are the real benefit of participation. Each District should seek their own chicken dinner to build a network that sells the civil works expertise of the Corps. 🕮

Planning Assistance to States

Mark Wingate - CEMVN

The New Orleans District considers the Planning Assistance to States program much more critical to the Civil Works program than the $500,000 per state limitation suggests. When the program is marketed creatively and the District's personnel exhibit enthusiasm and sincere interest, a District can successfully market other Corps' programs to prospective customers by "getting in the door" under the PAS program. The New Orleans District has coined the phrase "First Door to the Corps" to describe the philosophy. While undertaking a PAS study, Sponsors normally desire to advance the on-going study or initiate new studies. This provides a golden opportunity to market other Corps' programs and steer the Sponsor into the appropriate authorities including, GI, SFO, PAS, CAP, FPMS, Direct Appropriation, as well as other Federal, State, local, and private funding sources. The New Orleans District has used this approach successfully to "move" numerous PAS initiatives into the SFO, CAP and GI program. It all comes down to listening and understanding the needs of the customer and matching their problems to the appropriate program(s) whether they be Corps authorities or other agency programs. This philosophy can be seen by viewing the upcoming video entitled, "First Door to the Corps, New Orleans District's marketing philosophy". This video is scheduled for release in approximately 2 to 3 weeks. In addition, a slide presentation explaining our success in this area will be available on the Corps HQ homepage in the near future. 🕮

Fish and Wildlife Coordination Act Transfer Fund Agreement

Cheryl A. Smith, CECW-PD

The Corps and the Fish and Wildlife Service (FWS) have initiated a process to re-visit the Agreement, developed in 1980 and amended in 1982. This action is in response to a recommendation from CESWD. Although the out-dated language has not seemed to cause any major problems in implementation, there is a need to update the Agreement to ensure that our current business processes are fully reflected. In addition, a

number of District offices have informally raised issues and concerns that need to be investigated by the respective agencies. Division Offices have been requested to provide recommendations for revisions, identify any need for additional or expansion of existing partnering opportunities and to summarize issues which have arisen during implementation of the Agreement. The FWS is initiating a similar survey of their field offices. The Headquarters POC is Ms. Cheryl Smith, CECW-PD. The POC in FWS Headquarters is Mr. Dan Smalley.

Corps Involvement with the Gulf of Mexico Hypoxia Problem

Tom Pullen - CEMVD

Recent scientific work in the Gulf of Mexico has documented that a large area of bottom waters overlying the Louisiana continental shelf between the mouth of the Mississippi River and the state of Texas suffers from summertime low oxygen levels. This oxygen depletion, referred to as hypoxia, or more locally, as the "dead zone", reaches a maximum in midsummer and then disappears in the fall. Many aquatic species, including commercially valuable species such as shrimp, cannot survive in these waters.

It appears that nutrient over-enrichment from sources within the Mississippi River basin is a major cause of this annual problem. Excess nutrients, especially nitrogen, lead to increased algal and zooplankton production and delivery of organic matter to bottom waters. When this organic matter decomposes it consumes oxygen. Summer time conditions lead to a stratification of Gulf waters which hampers mixing of oxygen rich surface waters with oxygen poor bottom waters.

To address this problem, the U.S. Environmental Protection Agency (EPA) formed a Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (Task Force). Task Force membership includes representatives from several Federal agencies and the state and tribal governments within the Mississippi Basin. To assist the Task Force in its work, the White House Office of Science and Technology Policy was asked to conduct a scientific assessment of the causes of Gulf Hypoxia through its Committee on Environment and Natural Resources (CENR). This effort was led by the National Oceanic and Atmospheric Administration and was conducted by teams including academic, Federal, and state scientists. The scientific assessment is being used to evaluate management strategies that can be used to address the Gulf Hypoxia problem and to identify gaps in our understanding of the problem. Ultimately the findings of this scientific assessment will be consolidated into a single "Integrated Report" that addresses the issues. The Integrated Report will ultimately be used by the Task Force in developing a recommended plan for eventual submission to Congress that outlines what is needed to address and remedy the Gulf Hypoxia problem.

When the Task Force was initially established in 1997, the Assistant Secretary of the Army for Civil Works was designated as the Dept. of Defense (DOD) representative. Shortly thereafter, at the request of MG Phillip Anderson, Commander of the Mississippi Valley Division, responsibility for DOD and Corps of Engineers "day-to-day" involvement in Task Force activities was delegated to the Mississippi Valley Division. The Mississippi Valley Division has participated in this effort and provided technical staff support for the CENR scientific assessment process and the production of the Integrated Report.

The Task Force should complete its work by submitting an "Action Plan" report to Congress in the year 2000. It is likely that final recommendations for a program to address the Gulf Hypoxia problem will include significant actions that fall within the Corps' Ecosystem Restoration mission area.

Additional information on the ongoing effort can be obtained via the internet by accessing http://www.nos.noaa.gov/products/pubs_hypox.html or by contacting Dr. Tom Pullen at the Mississippi Valley Division office (601-634-5851 or tom.pullen@mvd02.usace.army.mil). 🕮

A New Partnership for the Corps: The National Fish and Wildlife Foundation

First in a Series

Cheree Peterson - National Fish and Wildlife Foundation

The Corps of Engineers work on environmental restoration creates an opportunity for an exciting new partnership with the National Fish and Wildlife Foundation, a Congressionally created non-profit dedicated to conservation of fish, wildlife, and plants, and the habitat on which they depend. Yearly, the Foundation receives congressional appropriations for conservation grants awarded to federal, state, and local agencies, as well as non-profits.

The Foundation identifies conservation needs, fosters cooperative partnerships to address these needs, and commits a mixture of federal and non-federal funds to on-the-ground conservation projects. We do this by awarding challenge grants seed money to assist grantees in raising matching funds. The Foundation strives to leverage federal dollars invested in conservation and we currently average better than a 2:1 return on funds entrusted to the Foundation. In total, the Foundation has supported more than 3,100 grants, committing over $133 million in federal funds, matched with non-federal dollars, delivering more than $422 million for conservation. The Foundation awarded funds to more than 940 grantees, and does not fund lobbying, political advocacy, or litigation.

The Foundation seeks to support the Corps of Engineers in fulfilling its environmental restoration mission. On March 26, 1998, the Assistant Secretary of the Army s (Civil Works) Office (ASA) signed a Memorandum of Understanding (MOU) with the Foundation to foster cooperation on projects of mutual interest, such as non-structural flood control opportunities, wetlands restoration, and endangered species protection. Corps employees can obtain a copy of the MOU by contacting the ASA s Office. In recognition of the importance of the MOU, the House of Representatives included the following language in the FY 2000 Energy and Water Development Appropriations Report: "The Committee notes that the Corps of Engineers has entered into a Memorandum of Understanding with the National Fish and Wildlife Foundation. The Committee looks favorably upon future cooperative efforts of the Corps and NFWF."

With this groundwork in place, the Foundation is exploring ways to partner more broadly with the Corps. To date, this effort focused on bringing together partnerships to cost-share environmental restoration projects, funding local sponsors for environmental restoration projects, and working with the Regulatory program on mitigation requirements or on special area management plans. In addition, the Foundation can also act as a fiscal agent, holding mitigation funds or other types of funds for a specified use. The Foundation looks forward to developing these partnerships with the Corps as well as looking for new partnership avenues. 🕮

Watershed Planning - Training Opportunities

Cheryl A. Smith, CECW-PD

During the week of July 12 through 16, the Hydrological Engineering Center (HEC) presented the Corps first watershed level course, *Water and the Watershed*, which was offered through the PROSPECT program. The course objective is to provide participants with an understanding of the physical nature of the water of the watershed and the conceptual, technical, and institutional tools available for planning and management. Thirty-four enthusiastic, highly motivated, Corps and National Guard Bureau employees attended this first offering. HEC's Bill Johnson is the course coordinator and should be commended for a job well done! As is typical with first offerings, there will be some changes for next year. Bill reports; "The students seemed to enjoy and get quite a bit out of the course. Several provided detailed suggestions, which I have taken to heart and sent a message thanking them. I have a pretty good idea what to do for next year to have more interaction and sharpen the focus." Thanks are extended to all of the participants for the participation and feedback throughout the week. And, for those attending the course during July 17-21, 2000, stay tuned for an even better course!

A number of other opportunities in watershed level training are available. In addition to the course mentioned above, *Working at a Watershed Level* will be offered, through the PROSPECT program, August 21-25, 2000. EPA has opened their *Watershed Partnership Seminar* to all interested. This is a two-week seminar offered through the Office of Personnel Management. Information on other watershed level training opportunities can be found through EPA's Watershed Academy at http://www.epa.gov/OWOW/watershed/wacademy.htm. 🕮

OMB Briefing on Ecosystem Restoration Projects

Ron Conner and Cheryl Smith – CECW-PD

At the request of the Office of Management and Budget (OMB), HQUSACE Planning Division staff provided a briefing of the process we use to evaluate and recommend ecosystem restoration projects. The briefing outlined the standard procedures used in evaluation of all water resource projects used in the Civil Works program, compared the ecosystem evaluation process to those standard procedures, and discussed types of projects, assessment techniques and the outputs we typically see in ecosystem restoration projects. Emphasis was placed on methods of quantifying and valuing the non-monetary outputs of these projects. With respect to assessment techniques, OMB staff showed particular interest in the Habitat Evaluation Procedure (HEP), the most frequently used assessment procedure for GI studies.

The briefing went well and OMB staff seemed comfortable with the conceptual approach we use in valuing these projects. However, OMB staff expressed concerns over the lack of an assessment methodology that allows the comparison of ecosystem restoration projects nationally. They had many project-specific concerns about particular applications of our evaluation approach and suggested they would be willing to assist in developing a ranking procedure for budgeting purposes. Although the difficulties of producing any ranking process were thoroughly discussed at the briefing, it was clear that OMB remains concerned about the comparison of ecosystem restoration projects nationally as well as the justification of the scope of individual projects. OMB concerns highlight the need to continue research into evaluation techniques for ecosystem restoration projects and to adequately document, in project reports, the process used to formulate, evaluate and identify the recommended project. 🕮

Corps of Engineers Dredging Information

Ginny Pankow CEWRC-NDC

The Dredging Information System (DIS) is a national database of U.S. Army Corps of Engineers dredging activity which tracks all Corps performed and contracted dredging from pre-bid estimate thorough execution and completion. Information in the database includes: dredging site, CWIS number, name and type of dredge used, dates of dredging, category of dredged material disposal, and the estimated and actual cost and quantity dredged. For contracts it also includes, the dates of the bid advertising and opening, the contract number and award date, the government estimate, all the bids and bidders, identification of the winning bidder, small business information, and contract set aside restrictions. The current database contains data from FY 1990 to the present. Archived data from FY 1984-1989 are available upon request.

The recent migration of the database into ORACLE now enables data entry and report generation using a standard web browser. Data are entered by District personnel directly into the central database where they are immediately available to all Corps members on the intranet at http://wpc21.usace.army.mil:9802/dis/plsql/USERMENU$.Startup. A userid of "guest" and a password of "guest" are required at this site. Contract and Corps dredge reports are also available on the Navigation Data Center's public internet site at http://www.wrsc.usace.army.mil/ndc/dredge.htm. These reports are updated every other Monday. In addition to the current reports, summary statistics and reports for Fiscal Years 1993 – 1998 are available, as reports or raw data, on the homepage and on the NDC Publications and U.S. Waterway Data CD. 🕮

Flood Damage Analysis Software Update

Mike Burnham- CEWRC-HEC-P

The development of new and improved flood damage analysis software and procedures for the Corps' planning studies and real-time water control management is an important part of HEC's research, district assistance, training, and guidance programs. The software development effort is directed towards enhancements to the Flood Damage Analysis program which includes risk and uncertainty for flood damage reduction studies, development of the Flood Impact Analysis program for event analysis and project benefit accomplishments used primarily in the water control management arena, and development of the Structure Inventory and Analysis program which is GIS driven.

The HEC-FDA Version 1.0 was released in January 1998. An updated version 1.1 is scheduled for late summer. It will include significant efficiency improvements to the structure inventory processing, several bug fixes, and a few minor enhancements. District staff experiencing efficiency or error problems with the version 1.0 release are encouraged to contact Bob Carl or Penni Baker immediately for interim fixes. The FDA Version 2.0 release is targeted for the end of the calendar year. It will feature numerous advances and improvements over the earlier versions. They include: working from spatially referenced background maps similar to other HEC programs; seamless data exchange with other HEC programs; integration with GIS for data entry, analysis and displays; incorporation of project cost and uncertainty into the analyses; and a host of other capabilities as defined by Corps users. The user's manual will also be updated for the version 2.0 release. Other related activities are the on-going preparation of a detailed HEC-FDA applications guide scheduled for release this fall, and continued work on residual risk and risk communication concepts and methods.

The Flood impact Analysis (HEC-FIA) program is being developed as a component of the modernized Water Control Data System. Its analyses are based on event or continuous hydrographs. FIA calculates the associated urban and agricultural damage and other impacts and displays the results by impact areas, congressional districts, counties, etc. The results are part of immediate post-flood assessment to assist with providing data for disaster relief declaration programs. The Corps project accomplishments may also be computed and processed for required annual reports to HQUSACE and Congress. The HEC-FIA program is presently being Beta tested with the Version 1.0 release scheduled for this fall. A draft user's manual has been prepared and will be finalized for the initial release.

The Structure Inventory and Analysis program using GIS is under development as an alternative means of inventorying structure attributes and performing interactive event damage analyses. Structure attributes may be obtained for individual structures off of aerial photographs, parcels, land use maps, or census tract data layers. Digital terrain model data are used to obtain the associated ground elevations. The data are processed into the HEC-FDA database for analysis. Once the database is fully populated, event damage may be determined at the structure or group of structures using flood inundation layers generated from GeoRAS. The program capabilities will be incorporated into the HEC-FDA Version 2.0 program. A working version of the program is being applied to selected Corps studies as its development evolves. 🕮

Community Based Watershed Efforts

Karen E Rippey - CESPN

The San Francisco District is finding great opportunities and challenges in watershed studies that embrace broad-based community participation. Traditionally, the Corps has relied on non-Federal sponsors to develop community support and input. This traditional approach is not applicable in dealing with the complexities of watershed issues and concerns. The District concluded a Reconnaissance Report on the Russian River (40 miles north of San Francisco) in September 1997, with a recommendation for a watershed type feasibility study in partnership with the State of California. Since that time, the Corps and the State have been working with the watershed community to develop a locally acceptable Project Study Plan (PSP). Although the process took time, a PSP was approved in January 1999 and it is expected that the State will sign an FCSA in October 1999 once the new State administration gets settled.

Watershed studies touch many stakeholders and therefore, rely on community participation that is based on direct and open communication between the Corps, the non-Federal sponsor(s) and all interested parties. A willingness to actively listen to opposing points of view has been important in the Corps' leadership effort, to foster an awareness of the importance of all participants in the study process. A proactive stance as a community member and close collaboration with all community members is enabling the San Francisco District to be responsive to the needs and concerns of the local communities in not only the Russian River watershed, but also the San Pablo Bay and Upper Napa River watersheds.

The San Francisco District is finding that successful community based watershed studies depend in large part, on accurate self-determined information that is understandable to the lay person. Baseline information must be developed and presented in such a way that all participants can visualize the state of their watershed from an ecosystem perspective. It is critical for watershed communities to develop a composite picture of the "health" of their watershed through a collaborative process. With the assurance that they are self-directed, the watershed community will willingly identify and prioritize specific problems, giving the Corps and other agencies the opportunity to spin- off more traditional work.

The San Francisco District believes that community based watershed studies will be the engine of its planning program in the future. The words of the South Pacific Division Commander after being briefed on the Russian River Watershed Study made this point. "We are getting pretty good at bringing people together over their water problems. It's good work for us and the nation." 🕮

Feasibility Report "Cookbook"

Robin Mooney - CESPD-ET-P

Always on the lookout for ways to streamline the feasibility study process, the South Pacific Division is exploring the potential for fielding an electronic feasibility report cookbook. The focus of this effort would be to provide clear definition of the information that must be developed in the feasibility study. It would also be a tool to expedite report preparation. Generally, the cookbook may take the form of an annotated outline with some boilerplate text and embedded tables that would cover minimum feasibility report requirements. The proposed outline would also integrate NEPA requirements into the report. Prior examples, opinions regarding minimum requirements and other suggestions are being solicited. These suggestions can be addressed to Robin Mooney, (415) 977-8167. 🕮

O Tempora! O Mores! (Part 2)

Brad Fowler – CECW-PD

Part I concerned engineers and engineering in early Romantic England and in early Soviet Russia.

Jump now to the present and the Corps of Engineers.

Would it be an exaggeration to think something sublime was in those old engineers, those who shaped the beginnings of the modern world and those who suffered its excesses, and that it was also in their works. If this is not an exaggeration, then it's natural to wonder, now, whether the sublime is in Corps engineers, and is it in what the Corps engineers. Or, is the sublime only in computer systems, in biomedicine, in entertainment; is electronically morphing shapes and shaping 3-D gore now the sublime.

Don't think that the old engineering works resulted only from rare and special talent, or were possible only because of unusual historical times. Undoubtedly the times and the 'personalities' were important, but to attribute all to those factors would be see only the transitory, be blind to the permanent, and thus largely to misunderstand. For those works resulted from the usual formula of ten- percent inspiration and ninety- percent perspiration. McAdam was a painstaking *observer*, spending thousands of hours watching carriages roll, and besides improving road construction he as much advocated improving road *management*, writing a book on the subject. Telford possessed "a new and modern spirit of *organization* combined with an almost medieval attention to *detail*." Stephenson was an experimenter and *builder* of engine after engine. These men were not geniuses; none started out well educated; all came from poor backgrounds but all became well educated through their engineering.

And what of the character of Solzhenitsyn's engineers – for it was character that landed them in front of firing squads and in the Gulag – and what of the character of the replacements? Solzhenitsyn says he knew

engineers well, from having grown up with them and from his experiences of them in the 1920's. Those engineers had "…open, shining intellects…free and gentle humor…"; they could move easily among engineering disciplines and, indeed, were not limited to technology but also knew the arts. "Then, too, they personified good manners…" and "…well-bred speech flowed…and their faces always bore a spiritual imprint."

Too idyllic you think; Solzhenitsyn's recollections are too rosy; no one could have been *that* good. Maybe so, but those engineers weren't sent to their deaths or into internal exile for being *just* engineers!

The Soviets wanted *new* engineers, new *men* – and they got them. Solzhenitsyn met some while he himself was enjoying island benefits, in prison cells. Once, a cell newcomer had the fat-padded face and the "air of weighty importance, of affiliation with the highest ranks," so that Solzhenitsyn and his cellmates thought they were looking at a general (because of his military style tunic), a colonel at least, but they were seeing – an engineer. One of the *new* ones. Recounting Solzenitsyn's description of the new engineers rise and nature isn't necessary; one sentence tells enough: "Freed from the restraints of courtesy, he stared sternly and spoke impersonally, as if he didn't even consider the possibility of a dissenting view." Suffice it to say the new engineers were *different* from the old.

Something like these old engineers' spirits once was in the Corps. To look at some older projects is to see it; to read Corps documents from 50 plus years ago is to sense the spirit even in the mundanity of a report. Impressive precision and pride and clarity of purpose were there. Is that 'something', that excellence, in today's projects; for certain it isn't in today's reports. The age of big projects is gone, some say, but so what; why should that matter? Telford's masterpiece was just a bridge, and not such a big one.

Cannot careful observation, conviction of beauty in interconnected detail, and determination, make a project management plan – a project study plan? – with the beauty of a great machine, and the great machine's efficiency? Is not the *management* of a continent-wide waterway system, or the *management* of a reservoir system as big as all England, at least as exciting and rewarding as managing a 20 mile radius of rural dirt roads (McAdam's case)?

And what about fidelity to principle, honor – are we really suggesting a parallel between the Corps and Soviet Russia, that Corps engineers find themselves defying death? That's absurd! the chorus answers. And maybe principles are malleable these days, relative, or maybe we really have said Goodbye To All That.

But, then, there is 'risky business' in the Corps. Even to ask certain questions is to earn –not the Gulag, certainly – but the non-team-player epithet, to be ignored and marginalized. For example, there are questions one simply cannot ask and expect to be engaged: Is there nothing in the Corps higher than the good of the district, or the vaunted customer? Does the Corps exist for the good of the districts, and is the districts' health the same as the Corps health? Who, exactly, is this customer we have so recently discovered, and what has even this customer *language* to do with government?

Or, what about the National interest, our duty to the taxpayers – we used to talk a good deal about that. It was a working concept. What happened to it? Can we write off the ideal – a two hundred-year tradition – of service to the *nation*?

Or, is the Corps turning itself into a grants agency that happens to be its own general contractor, and what will happen when customers discover less expensive general contractors? What is the *purpose* of all these management initiatives and proposed changes?

Southey's engineers were the new builders; they defined the idea of technological progress. Solzhenitsyn's engineers were builders too, but they were crushed by a social machine, partly of their own

construction, and operating in the name of social progress. Times change and history gets written; this is a time of change for the Corps of Engineers, perhaps even of a sort like Southey's or Solzhenitsyn's.

One fact now seems clear to me – it's only taken a career to realize it, for though some had taken pains to explain it, until recently I refused to believe it – this organization is the Corps of *Engineers*, not the Corps of Economists, not the Corps of Ecologists, not the Corps of Anything Else. While previously I had had to concede that control by engineers, whether due to accident or *real politick*, was an historical fact, I could hope the future would be different; this view and hope I know to have been common among Corps non engineers. But I now believe that such control was, and is, not only a fact, but right and fitting, and also that it's absolutely necessary it continue. Coming from an engineer this statement might be considered Engineer Hubris, the engineers' easiest sin. (It's quite common too.) Coming from a non-engineer the statement is heretical, and maybe more interesting because of that. For I now believe it is engineers who will carry the Corps on their shoulders, if they do not they could see it dashed at their feet. There are reasons for the turnabout, but reasons for another day.

Facts and quotes from Paul Johnson, *The Birth of the Modern: World Society 1815-1830*, Harper Collins, 1991; chapter 3, which should be of special interest to engineers. Alexsandr I Solzhenitsyn, *The Gulag Archipelago*, Volumes I-II, Harper & Row, 1973; throughout – use index under "engineers", "Promparty" and individual names to trace the fate of the Old Russian engineers, whom Solzhenitsyn much loved. 🕮

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Submissions Deadline

The deadline for material for the next issue is **8 September 1999**. 🕮

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